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IN THE CLAIMS

1 (Previously Presented). A multiprocessor device comprising:

a least three interconnected processors for direct communication between said processors; and

an optical transceiver coupled to each processor, said transceiver including a wavelength division multiplexer to enable optical communications with the other processors, wherein said transceiver to notify a first of the three processors when a second of the three processors is receiving a signal from a third of the three processors.

2 (Previously Presented). The device of claim 1 wherein each transceiver includes an optical transmitter including a laser.

3 (Previously Presented). The device of claim 1 wherein each transceiver includes an optical receiver tunable to a particular input wavelength.

4 (Previously Presented). The device of claim 1 wherein each processor is assigned a wavelength for communicating with the other processors.

Claims 5 and 6 (Canceled).

7 (Previously Presented). The device of claim 1 wherein said coupler includes an dispersive element to disperse light reflected by said reflector.

8 (Previously Presented). The device of claim 7 wherein said dispersive element includes a microelectromechanical structure.

9 (Previously Presented). The device of claim 1 wherein each transceiver transmits a light beam together with a code identifying a sending and a receiving processor.

10 (Previously Presented). The device of claim 1 wherein, when one processor is receiving a wavelength division multiplexed signal from another processor, the one processor broadcasts to all other processors that the one processor is busy.

11 (Previously Presented). A method comprising:

establishing a multiprocessor device including at least three directly interconnected processors;

enabling optical communications between said processors using wavelength division multiplexing; and

notifying a first processor when a second processor is receiving an optical communication from a third processor.

12 (Original). The method of claim 11 including assigning a unique wavelength to each of said processors.

13 (Original). The method of claim 11 including scanning for the wavelengths of any of said other processors.

14 (Original). The method of claim 13 including transmitting a light beam having a predetermined wavelength, and transmitting a code that identifies the transmitting processor and the intended receiving processor.

15 (Original). The method of claim 14 wherein the receiving processor identifies the wavelength of the incoming beam and the code accompanying said beam, and locks to the wavelength of the transmitting processor.

Claim 16 (Canceled).

17 (Previously Presented). The method of claim 15 including broadcasting the fact that the second processor is receiving a beam to all other processors in the device.

18 (Original). The method of claim 17 indicating when said second processor is no longer communicating with said third processor.

19 (Previously Presented). The method of claim 11 including using a code transmitted by the third processor to determine if a given processor is the intended recipient of a beam transmitted from the third processor.

20 (Original). The method of claim 11 including optically interconnecting each of said processors.

21 (Previously Presented). An article comprising a medium storing instructions that enable a first processor-based system of a multiprocessor-based device including a second processor-based system and a third processor-based system to:

identify a light communication from a second processor-based system intended for said first processor-based system;

tune to said wavelength; and

notify a first processor when a second processor is receiving an optical communication from a third processor.

22 (Original). The article of claim 21 further storing instructions that enable the first processor-based system to scan through a plurality of wavelengths of other processor-based systems to identify a signal intended for said first processor-based system.

23 (Original). The article of claim 21 further storing instructions that enable the first processor-based system to receive a code that indicates whether a given light communication is intended to be sent to said first processor-based system.

24 (Original). The article of claim 23 further storing instructions that enable said first processor-based system to tune to said wavelength to the exclusion of other wavelengths.

25 (Original). The article of claim 24 further storing instructions that enable said first processor-based system to broadcast a signal indicating that said first processor-based system is tuned exclusively to said wavelength.

26 (Original). The article of claim 25 further storing instructions that enable the first processor-based system to notify a third processor-based system when said first processor-based system is no longer engaged in a communication with said second processor-based system.

27 (Original). The article of claim 21 further storing instructions that enable said first processor-based system to identify a second processor-based system to communicate with and to determine whether said second processor-based system is currently occupied with a communication with another processor-based system.

28 (Original). The article of claim 21 further storing instructions that enable said first processor-based system to communicate with at least two other processor-based systems using optical communications and wavelength division multiplexing.

29 (Original). The article of claim 28 further storing instructions that enable said first processor-based system to communicate with other processor-based systems using an assigned wavelength.

30 (Original). The article of claim 29 further storing instructions that enable said first processor-based system to transmit a code that identifies said first processor-based system and an intended receiving processor-based system.